

AMENDED CLAIMS

1. (previously presented) A polarized light beam splitter assembly comprising:
 - a polarized light beam splitter prism including a first internal exposed surface and a second internal exposed surface; and
 - a wire grid polarizer including a first surface and a second surface raised from and parallel to said first surface and including a perimeter region and a central region, said first surface of said wire grid polarizer secured to said first internal exposed surface of said prism, and said second surface of said wire grid polarizer secured to said second internal exposed surface of said prism in said perimeter region so as to define an air gap between said second surface of said wire grid polarizer and said second internal exposed surface of said prism in said central region such that said wire grid polarizer does not contact said second internal exposed surface of said prism in said central region.
2. (previously presented) The assembly of claim 1 further comprising spacers positioned within said perimeter region, said spacers having a height that defines a width of said air gap.
3. (original) The assembly of claim 2 wherein said second surface of said wire grid polarizer is secured to said second internal exposed surface of said prism in said perimeter region by an adhesive, and wherein said spacers are distributed within said adhesive.
4. (original) The assembly of claim 2 wherein said spacers are formed on said second surface of said wire grid polarizer.

5. (original) The assembly of claim 2 wherein said spacers each define a rigid sphere, and wherein said height of said spacers is equal to a diameter of said rigid spheres.

6. (original) The assembly of claim 1 wherein said prism comprises a glass cube.

7. (original) The assembly of claim 1 wherein said prism defines an elongate axis and wherein said first and second internal exposed surfaces are positioned at an angle in a range of one to eighty nine degrees with respect to said elongate axis.

8. (original) The assembly of claim 7 wherein said first and second internal exposed surfaces are positioned at an angle in a range of forty to fifty degrees with respect to said elongate axis.

9. (previously presented) The assembly of claim 1 wherein said second surface of said wire grid polarizer includes a wire grid thereon such that said wire grid is in communication with said air gap and such that said wire grid does not contact said second internal exposed surface of said prism in said central region.

10. (currently amended) A polarized light beam splitter assembly comprising:

a polarized light beam splitter including an embedded wire grid polarizer having a wire grid including an uppermost raised surface, wherein a central region of said uppermost raised surface is in communication with an internal air gap positioned upwardly from said uppermost raised surface and between said uppermost raised surface and an internal surface of said beam

splitter and wherein a perimeter region of said uppermost raised surface is secured to an internal surface of said beam splitter;

a light source positioned to emit light to said polarized light beam splitter; and

a reflection device positioned to receive light redirected by said polarized light beam splitter.

11. (original) The assembly of claim 10 wherein said light source emits light having a predetermined orientation, and wherein said reflection device is chosen from the group consisting of a liquid crystal display panel and a mirror and a quarter wave plate.

12. (original) The assembly of claim 10 wherein said polarized light beam splitter defines an elongate axis and wherein said internal air gap is positioned at an angle of approximately forty five degrees with respect to said elongate axis.

13. (currently amended) The assembly of claim 10 wherein said polarized light beam splitter defines first and second sections, said embedded wire grid polarizer is secured to said first section, and said embedded wire grid polarizer is secured to said second section only in a said perimeter region thereof by adhesive having spacers distributed therein, wherein said spacers define a width of said internal air gap.

14. (original) The assembly of claim 10 wherein said polarized light beam splitter comprises a glass prism.

15. (original) The assembly of claim 10 wherein said air gap has a width in a range of one to thirty μm .

16. (original) The assembly of claim 10 wherein said air gap has a width of approximately ten μm .

17. (previously presented) A polarized light beam splitter system comprising:

a polarized light beam splitter including first and second sections;

an embedded wire grid polarizer including first and second parallel surfaces, said embedded wire grid polarizer secured to said first section of said polarized light beam splitter at said first surface, and said embedded wire grid polarizer secured to said second section of said polarized light beam splitter only in an edge region of said second surface; and

at least one spacer positioned between said second section of said polarized light beam splitter and said second surface of said embedded wire grid polarizer in said edge region such that said second surface of said wire grid polarizer is positioned opposite an air gap from said second section of said polarized light beam splitter in a central region of said second surface.

18. (original) The system of claim 17 wherein said spacer comprises a raised projection in said edge region of said second surface of said embedded wire grid polarizer.

19. (original) The system of claim 17 comprising a plurality of spacers positioned between said second section of said polarized light beam splitter and said second surface of said embedded wire grid polarizer in said edge region, wherein said spacers comprise rigid spheres having a predetermined diameter.

20. (previously presented) The system of claim 17 wherein said wire grid polarizer includes a wire grid in communication with said air gap, and wherein said air gap has a uniform width across said air gap.

21. (previously presented) A polarized light beam splitter device comprising:

a polarized light beam splitter including first and second sections that define an air gap there between; and

an embedded wire grid polarizer secured to said second section only in a perimeter region of said wire grid polarizer and secured to said first section and within said air gap such that a central region of said wire grid polarizer is not in contact with said second section and such that said air gap extends between said wire grid polarizer and said second section of said beam splitter.